

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

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Applicant's or agent's file reference P22890/WO SE/fei	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP00/09565	International filing date (day/month/year) 29 September 2000 (29.09.00)	Priority date (day/month/year) 01 October 1999 (01.10.99)
International Patent Classification (IPC) or national classification and IPC A61C 1/18,		
Applicant KALTENBACH & VOIGT GMBH & CO.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 8 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 4 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 02 May 2001 (02.05.01)	Date of completion of this report 04 January 2002 (04.01.2002)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP00/09565

I. Basis of the report

1. This report has been drawn on the basis of *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.)*:

- ☒ the international application as originally filed.
- ☒ the description, pages 1 - 13, as originally filed,
pages _____, filed with the demand,
pages _____, filed with the letter of _____,
pages _____, filed with the letter of _____.
- ☒ the claims, Nos. _____, as originally filed,
Nos. _____, as amended under Article 19,
Nos. _____, filed with the demand,
Nos. 1 - 17, filed with the letter of 11 October 2001 (11.10.2001),
Nos. _____, filed with the letter of _____.
- ☒ the drawings, sheets/fig 1/3 - 3/3, as originally filed,
sheets/fig _____, filed with the demand,
sheets/fig _____, filed with the letter of _____,
sheets/fig _____, filed with the letter of _____.

2. The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

4. Additional observations, if necessary:

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I. Basis of the report

1. This report has been drawn on the basis of *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.)*:

In the independent Claim 1 submitted with the letter of 2 May 2001, the following feature has been deleted: "the threaded shank is characterised by a full thread". The subject matter of the amended independent Claim 1 seeks protection for embodiments, all of which are characterised by features defined in the preamble in combination with a threaded shank without a full thread. Neither the original description nor the original claims disclose such a threaded shank. Thus, the amendments introduce substantive matter which, contrary to PCT Article 34(2)(b), goes beyond the disclosure in the international application as filed. This report has been established as if said feature had not been deleted.

In addition, only the subject matter of the original Claim 1 has been taken into consideration for the purpose of the international search. Therefore, no international search report has been established for the subject matter of the amended independent Claim 1.

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	6, 8-13, 15-17	YES
	Claims	1-5, 7, 14	NO
Inventive step (IS)	Claims	8-13	YES
	Claims	1-6, 14-17	NO
Industrial applicability (IA)	Claims	1-17	YES
	Claims		NO

2. Citations and explanations

Reference is made to the following documents:

D1: US 4 003 669 A
D2: US 1 907 522 A
D3: DE 9 316 867 U
D4: US 2 676 509 A.

1. Independent Claim 1

1.1 Document D4 can be considered to be the closest prior art. D4 discloses two "elements to be linked together by means of a bolted connection", one of which elements has a tapped bore (D4, column 1, lines 41-53, element 10) while the other has a threaded shank (D4, Figure 4, element 5), wherein the tapped bore has a transversely offset enlarged port, on an inlet side of the runout part of its length, into which the threaded shank can be axially inserted (D4, column 2, lines 29-37, enlarged port 20), wherein the threaded shank can

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be transversely displaced between said transversely offset insertion position and an insertion position that is coaxial in relation to the tapped bore and the remaining thread grooves of the tapped hole (D4, column 2, lines 29-37),

wherein the enlarged port is laterally covered by a wall section of one element,

wherein the threaded shank comprises a full thread.

The elements known from D4 (see D4, Figure 4) can be screwed against a limit stop which acts between them, wherein the limit stop is formed by the end face of one element, which face comprises the tapped hole, and a facing ring shoulder in the "foot region" of the threaded shank; although Figure 4 shows two plates between the end face and the ring shoulder, the two elements (5 and 10) can be screwed together without said plates, in which event a limit stop is formed as above.

The element comprising the tapped hole known from D4 consists of two pieces. In the description of the present application, on the other hand, the embodiments of the tapped hole are formed of a single piece. However, the feature "formed of a single piece" is not defined in the independent Claim 1 and, in consequence, the bolted connection known from D4 comes under the scope of protection of Claim 1.

The subject matter of Claim 1 is therefore not novel and thus fails to meet the requirements of PCT Article 33(2).

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Said feature concerns only one of a plurality of obvious possibilities from which a person skilled in the art would choose according to the circumstances in order to limit the movement of the bolt in relation to the tapped hole, without thereby being inventive.

Therefore, the subject matter of Claim 1 does not involve an inventive step and in consequence fails to meet the criteria set out in PCT Article 33(3).

2. **Independent claim 8**

D2 discloses two elements to be linked together by means of a bolted connection, one of which comprises a tapped hole (D2, Figure 1, element 2 with tapped hole and page 1, lines 48-50) whilst the other comprises a taper on a runout part at the free end of its length (D2, page 2, lines 91-99),

wherein the taper is radial and is designed to have a circumference large enough to allow the threaded bolt to be inserted for part of its length into the core hole of the tapped hole, and

wherein the elements can be screwed against a limit stop which acts between them (D2, page 2, lines 99-103).

The subject matter of Claim 3 differs from said known combination in that the taper is laterally arranged and is so designed that, after it has been inserted into the core hole of the tapped hole, the remaining thread grooves of the threaded shank can

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1.2 D3 can also be considered to be the closest prior art. D3 discloses two "elements to be linked together by means of a bolted connection", one of which comprises a tapped hole (D3, Figure 1) and the other a threaded shank (D3, Figure 3, element 11), wherein the tapped bore has a transversely offset enlarged port, - on an inlet side of the runout part of its length, into which the threaded shank can be axially inserted (D3, Figure 3, enlarged port 4), wherein the threaded shank can be transversely displaced between said transversely offset insertion position and a position that is coaxial in relation to the tapped bore and the remaining thread grooves of the tapped hole (D3, Figures 3 and 4), wherein the enlarged port is laterally covered by a wall section of one element and wherein the threaded shank comprises a full thread.

The tapped hole known from D3 comprises a second transversally offset enlarged port on the outlet runout part of its length. Claim 1 is so drafted that an embodiment comprising a second enlarged port, as described, is not excluded from the protection sought.

The subject matter of Claim 1 differs from the bolted connection known from D3 only in that the elements can be screwed against a limit stop which acts between them, wherein the limit stop is formed by the end face of one element, which face comprises the tapped hole, and a facing ring shoulder in the "foot region" of the threaded shank.

be transversally displaced in the thread grooves of the tapped hole. The problem addressed by said feature can thus be considered to be that of devising a simple operation for bringing the threaded bolt and tapped hole into mutual engagement. D2 discloses another solution (a pilot hole) to said problem. It is therefore improbable that the person skilled in the art would seek any further solution.

The subject matter of Claim 3 appears to involve an inventive step (PCT Article 33(3)).

3. Claims dependent on Claim 8

Claims 9-13 disclosed particular embodiments of the invention defined in Claim 1.

The subject matter of Claims 9-13 therefore appears to be novel and to involve an inventive step (PCT Article 33(2) and (3)).

4. Claims dependent on Claim 1

4.1 The features defined in Claims 2-5, 7 and 14 are known from D4. Therefore, their subject matter is not novel within the meaning of PCT Article 33(2).

4.2 The features defined in Claims 2, 4, 5 and 7 are known from D3. Therefore, their subject matter does not involve an inventive step within the meaning of PCT Article 33(3).

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- 4.3 D3 is considered to be closest prior art in respect of the subject matter of Claim 6.

The dependent Claim 6 relates to a minor structural modification of the elements according to Claim 1, which would be straightforward for a person skilled in the art, especially since the resulting advantages (structure of the bolt) are readily foreseeable. In consequence, the subject matter of Claim 6 likewise does not involve an inventive step.

- 4.4 Claim 15 can be considered to be dependent on Claim 1. The features defined in said claims are however already defined in Claim 6. In consequence, the subject matter of Claim 15 likewise does not involve an inventive step.

- 4.5 Claims 16 and 17 can be considered to be dependent on Claim 1. They relate to the adaptation of similar elements, to be linked together by means of a bolted connection, for use in a medical instrument. Such an adaptation does not appear to involve an inventive step. Therefore, Claims 16-17, being dependent on Claim 1, fail to meet the requirements of PCT Article 33(3).

5. Industrial applicability

Claims 1-17 appear to satisfy the requirements of PCT Article 33(4).

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VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

Pursuant to PCT Rule 5.1(a)(ii), the description should have cited D1, D2 and D3 and briefly outlined the relevant prior art disclosed therein.